

HISTORY OF AMERICAN GYNECOLOGY: A BRIEF OUTLINE

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It is not in our day nor has it ever in the past been granted a great scientific specialty to spring like Minerva fully armed from the brain of Jove, that is to say, to be born of the exceptional acts of one or two men. Such individual acts, however, may predicate something germinating, which like the prophetic kickings of the child in the mother's womb foretell a forthcoming revelation. Notable heralds of such a nature were the operations of Ephraim McDowell, doing his first ovariectomy on Mrs. Jane Crawford in 1809, and the accomplishment of Marion Sims in closing the large vesicovaginal fistula of a sorely afflicted negro wench, Anarcha, in Montgomery, Alabama, in 1849, at her thirtieth operation. These isolated and seemingly individual and widely separated exploits sprang up out of a barren soil as yet not mollified by the beneficent dews and showers of succeeding years of laborious effort, destined to join them, *par fratres didyami*, in a new specialty. Not that there were no aspiring gynecologists, excellent men in the early dawn of the first half of the last century, but the thought will spring up, Would we not have been better off in the fashioning of this now old specialty, as an exemplar in medical science, if the slate had been wiped clean of all but a few names, such as Blundell and Churchill. We must not, however, pass without a respectful bow to a zealous group busy from the first decade down into the seventies, obstetricians by training and experience, seemingly almost guided by the old dogma of the Church, *ecclesia abhorret a sanguine*; among them were the followers of Smellie, William Hunter, and the antecedent French school of Mauriceau and Levret, in their teaching functions embracing obstetrics, under the title, diseases of women and children.

It is instructive and more than a matter of curious interest to inquire into the nosology of that nascent period. Let me, therefore, casually cite a few excerpts from this now dust-begrimed literature.

Parenthetically, let us recall that our great-grandfathers were not surgically minded; they even hesitated to make a physical examination and when they did reluctantly examine, it was dubbed "le toucher"—an uneducated finger contact, a timid step associated with an inspection of the *os tincae*. Knowing no established pathology, they misinterpreted their exiguous findings; consequently their treatments, palliative and ineffectual, leaned hard for support on old Father Time. A glimpse of this detachment from surgery in England and America appears in a frank statement of that excellent writer on diseases of women, Charles West of London, in the 1858 preface to his second volume: "To one of my colleagues at St. Bartholomew's Hospital I have been constantly indebted whenever the aid of a surgeon was necessary; and Mr. Paget's dextrous hand and sound judgment and ready friendliness were always given, almost without the asking."

The nomenclature of our ancestors has an "over the hills and far away" sound. Some of the diseases, expatiated upon at length in such representative

text-books as Bennett, West, Tilt, Dewees, Hodge, Gooch, Ashwell, et alii, are: Hypertrophy of the uterus, cervicitis and metritis, cellulitis and endometritis, irritable uterus, and ovaritis, which hung on for a long time; inversion of the uterus was a favorite topic, with leukorrhea, mucous cysts, polypi, flooding, and ganglionic paralysis. Tilt wrote a voluminous treatise on uterine and ovarian inflammation in 1850, expanded later to 455 pages. The *fons et origo* of many nervous diseases according to the gynecologist was located in the female pelvis.

Charles D. Meigs of Philadelphia wrote a substantial, handsomely illustrated monograph in 1854 on "Acute and Chronic Diseases of the Neck of the Uterus," in which he urges as a valid objection to gynecological examinations the likelihood of inducing a lax moral sense in the patient. He remarks, "Either process of examining the cervix by touch or by speculum is bad enough in itself considered . . . but neither could be supposed possible except out of some direful necessity to the patient. . . . There are found individuals so fastidious as to prefer pain, disease, and even death itself to revelation concerning its disorders. . . . Even to examine by Touching does in many parts of the United States appear to be a revolting proposition, and there are some persons who prefer to make journeys of hundreds of miles in order that such an inquiry, supposing it to be indispensable, may be instituted by a stranger and far from home." He admits, however, the sometimes imperious necessity of using the metroscope (speculum)! Alas, *nous avons changé tout cela!*

Our distinguished Hugh L. Hodge, in "Diseases Peculiar to Women," 1860, devotes some 130 pages to the irritable uterus and 129 to displacements.

Pessaries beclouded the horizon of our ancestors as they descanted on ante-flexion, retroflexion, and prolapsus. Meigs' excellent translation of "Colombat de L'Isère" (1845), adding some hundred personal pages, relates that Dr. Physick in prolapsus used a globe pessary, first tested out while he was John Hunter's pupil dresser at Guy's Hospital. A patient had a bad prolapsus uteri. "One day while paying his visits he saw a billiard ball that had been rolling about the ward, and the idea struck him that it might serve to support the womb of the case in question. He introduced it, and it succeeded so perfectly, alleviating her distress, that he ever afterward preferred to employ the globe rather than the disk or any other of the numerous forms of instrument." Meigs registers his own preference for a metal rather than a glass pessary on account of its greater lightness.

The spirit of these early days is fairly, if bombastically, illustrated by T. Gaillard Thomas in his valuable "History of Obstetrics and Gynecology" (Amer. Jour. Med. Sci., lxxii, 1876), where, speaking of Hodge's "consummation of the discovery of the lever pessary," he quotes R. A. F. Penrose, quiz-master under Hodge, Philadelphia, 1873, "He had been contemplating for a long time the subject of new shapes of pessaries and after many experiments found nothing satisfactory. One evening while sitting alone in the room, where meetings of the medical faculty of the University were held, his eyes rested on the upright steel support by the fireplace, designed to hold shovel and tongs. The shovel and tongs were kept in position by a steel hook, and as he surveyed the supporting curve of this hook, the long-looked for illumination came; the shape, so paradoxical, revealed itself in the glowing light and flickering flame of the burning grate, and the Hodge lever pessary was the

result. A sudden effort of genius was it? No; this was the moment at which the detached thoughts long and carefully stowed away in the inventor's mind combined to form a harmonious whole. The steel did for his mind what the swinging church lamps did for that of Galileo in suggesting a pendulum." Such high bathetic oratorical flights "bringing down the house" were common in our lecture rooms until the advent of prosaic laboratories.

A great and last protagonist of this, which might be dubbed pessary school of gynecologists, was Grailey Hewitt.

We note also in this early era how sizeable reputations were built up upon small inventions or slight modifications of some other man's instrument, given the author's name, capitalized, and zealously advocated. Such, indeed, were many of the quirks in the vast horde of pessaries; there were the Hodge, the Smith-Hodge, the Thomas-Smith-Hodge, and the Mundé-Thomas-Smith-Hodge; the delectable Fowler was shaped like a rocking chair for the comfortable repose of the cervix. Germany also contributed her full share to the repertoire. Some, indeed, like Zwanck's with its spreading flanges, were dangerous, as they ulcerated through the vaginal walls. I saw an old woman die of infection from a big, foul, stuffed, varnished leather ring inserted many many years before by a midwife. Out of this pessary welter, however, there did emerge a little group of occasionally useful forms, such as the hard rubber rings of various diameters, the hard rubber or glass balls for prolapsus, the Gehrung and the Schulze pessaries. We are today too liable to forget these old workmen and so fail to relieve our patients after the simpler fashion of our forefathers, while overemphasizing the more dramatic amphitheatrical operative interventions.

My own immediate induction into the gynecological field was in the late seventies as a student in the University of Pennsylvania Hospital Dispensary, Philadelphia, in Baer's service, familiarly Benny Baer an understudy of Goodell. In that still crepuscular era the routine practice was to paint the vaginal vault with Churchill's tincture of iodine in one case and with a mixture of chloral and carbolic acid and glycerin in the next, and then to insert a gauze pack coated with boroglyceride. Puffy cervixes were depleted by multiple punctures, nabothian cysts were opened, and so-called "ulcerations" were "treated with the solid nitrate of silver stick." It was this same baneful stick which, left in the cervix for a more effective treatment, gave rise to cicatricial contractions, causing frightful dystocias. Following precedent, I carried out these procedures for several years while drifting slowly with the gynecological field evolving in its newer operative direction. Wm. Goodell meticulously urged upon us as students, while examining the well-draped patient to keep our eyes fixed on the ceiling in making our first embarrassed efforts to effect an "indagation."

Let me recall another incident in about 1879, as I sat on the benches and watched R. A. F. Penrose, "sashaying" around in the amphitheater, with a dummy patient draped on the table before him, proclaiming with a mighty histrionic effort his great therapeutic discovery. It was a momentous occasion—a mother was becoming exsanguinated by a postpartum hemorrhage. Spurred by necessity the mother of invention, Penrose called for vinegar, and, saturating a sponge, thrust it boldly up to the fundus of the flaccid uterus; presto! a vigorous contraction took place, the cure was effected, and the victim saved. The applause may be imagined. The lesson was never

forgotten. As in these later more sophisticated days we indulge in kindly criticisms over the ways of our antecedents, let us not foolishly imagine ourselves a superior race; the truth is that while our ancestors had few discoveries to record, they did drive home their lessons in such fashion that pupils off on long treks over country roads and hills and valleys, braving all weathers, in their lonely vigils, working with primitive tools (even a straw serving at a pinch for a female catheter), did always remember the teachings of the great professor of their student days and brought the needed relief.

George Baglivi "spoke a parable" when he declared some two hundred years ago, "*Medicina non ingenii humani partus est, sed temporis filia.*" Slow progress observable through the decades at last came, and then suddenly, to its fruition.

Let us now turn for inspiration to a brief review of the field of ovariectomy.

The gauntlet, first thrown down by McDowell in 1809 and again, independently, in 1821 by Nathan Smith, was picked up hesitatingly and with many objections in the United States and in England. It took the seed years to germinate, and even then the operators appearing one by one were at once on the defensive for an undertaking so widely condemned. In England, Charles Clay of Manchester, in the late forties, was the first great leader, who by his excellent results even in preantiseptic and preanesthetic days became the father of ovariectomy in Great Britain, publishing 32 cases with 10 deaths, in 1848, and having completed 77 with 24 deaths, in 1857, finally attaining 395 in all, with a mortality of 101, almost identical with his lineal successor, Spencer Wells, in his whole thousand cases. Clay, unaware of Nathan Smith's successful operation (1822) in which the pedicle was tied prophetically with a strip of leather from a glove, cut short and dropped, used the customary long ligatures brought out at the lower angle of the abdominal wound. Stewart McKay, in his exemplary life of Lawson Tait, to which I am constantly indebted, remarks on this head, "Had he followed Smith, abdominal surgery would have advanced by half a century." In spite of all the obvious inherent difficulties, the mortality percentage—as much as 85 per cent in some instances—dropped to 50, without anesthesia or asepsis, and so ovariectomy began its successful course. It was Spencer Wells who forced the successes (sic) of ovariectomy upon the attention of the world and secured for it an established position on the continent as well as in its transatlantic home. Wells, like many other Britishers and our own confrères lagging behind Germany, was slow in appreciating and adopting the antiseptic principles in his work, but when this light penetrated his sensorium, his mortality dropped at once from about 34 in his first hundreds to only 11 in his last. In Wells's latter years, Lawson Tait, a zealous but overly jealous opponent and strange to say aggressive against the prevailing Listerian innovation, countered the Wellsian statistics with his own distressing record of 19 deaths in his first 50, with a final 137 recoveries without a death (1886).

Not to omit the highly creditable record of one of our earliest operators, Alexander Dunlap (1815–1894), of Springfield, Ohio, we read, "On the seventeenth of September, 1843, I performed my first ovariectomy and carefully wrote out the case and sent it to a medical journal (the Western Lancet, edited by John P. Harris, one of his former professors). They sent it back with a note stating that they could not publish the case of such an unjustifiable operation. I threw it into the waste basket, determined to write no more for

medical journals; but, being satisfied that I was right, to continue the operations. From that time, for a number of years, I was looked upon by most of the profession out West as a kind of Ishmaelite in the regular profession in regard to surgery, and in that operation in particular . . . I have now operated 106 times for ovariectomy (1876) with 27 deaths and 79 cures."

Our leading protagonists in this formative period were the Atlees, Washington Lemuel and John Light, of Lancaster, Pennsylvania, the former settling in Philadelphia, the latter remaining at home where a namesake and grandson practises today. John Light took his initial step June 29, 1843, when he successfully removed both ovaries for the first time, in the succeeding forty years performing the operation 78 times with 64 recoveries and 14 deaths, a mortality of but 18 per cent! Washington Lemuel (1808-1878), writer and one of our greatest American surgeons, beginning also in Lancaster in 1844, was able by 1878 to look back upon an experience of 387 operations. In 1845, citing his collected statistics of 101 in the *Amer. Jour. Med. Sci.*, he comments on his first effort in a one-story brick tenement on the banks of a small stream in western Pennsylvania, "No one can know the mental and moral conflicts of that hour, and I cannot describe them."

The attitude of the profession in my younger days was often depicted to me by Robert P. Harris of Philadelphia, eminent medical statistician and writer, who related that a well-known physician, seeing Washington Atlee coming down the street, crossed to the opposite side, remarking, "There comes that murderer." This is confirmed by Atlee who says upon coming to Philadelphia, "I found I had rased a hornet's nest. Ovariectomy was everywhere decried. . . . I was pointed at as a dangerous man, even as a murderer. . . . A celebrated professor in his published lectures invoked the law to arrest me in the performance of this operation."

May I digress to recall that in accord with the traditions of his profession, Atlee was a peripatetic and made operating tours, like the master physicians of the preceding centuries. One such *Ausflug* brought him to Norfolk, Virginia, where in the year 1869 he saw Miss J. S., daughter of the leading physician, who had a broad-based fibroid tumor which filled the pelvis and lower abdomen, and extended well above the umbilicus. With characteristic thoroughness he sketched it and left a description of the large intramural growth; there was evidently no thought of operation. I found on being called to this patient twenty-five years later, May, 1894, an entire abdomen distended by a huge symmetrically disposed growth, with a circumference of 128 cm. and an anterior wall lifted forward 48 cm. above the level of the bed on which she lay. She had an umbilical hernia 6 x 7 cm. and a tender, distended gallbladder under the arch of the ribs, and suffered acutely with renal colics from the pressure on the ureters. At the radical operation May 12th, a small uterus was found crowded down to the pelvic floor by a fibroid mass weighing 59 pounds, attached to the uterine wall by a pedicle nourished by three large arteries. The extirpation was prolonged and exceedingly difficult as the tumor was welded to the anterior wall by dense vascular adhesions caused by the strong electric currents used by A. J. C. Skene of Brooklyn to check the growth. The large gallbladder filled with pus was opened, evacuated, and drained. She made an uninterrupted recovery and lived seven years in excellent health; her death was unconnected with any of her old ailments.

It is practically impossible today to realize the difficulties our antecedents often had in being sure of a diagnosis, and their dread of making a mistake; it remained for a younger generation to operate on a symptom without a diagnosis. The welcome news then was hailed when Atlee's son-in-law, Thomas Murray Drysdale (1831-1904) reported the discovery of a granular cell in the ovarian fluid, called the ovarian corpuscle (Trans. Amer. Med. Assoc., xxiv, 1873), which could be aspirated by a hypodermic syringe. And how we searched for this cell and gazed with untrained eyes through the microscope seeking to combat our uncertainties. Unfortunately, alas, the "discovery" did not stand the acid test of time.

Any résumé of pioneers, however brief, must not omit the name of E. Randolph Peaslee (1814-1878) of New York, lecturer and writer, one of the best scientific minds this country has produced in abdominal and pelvic surgery, who reached out and grasped the spirit of the new era. His first operation was in 1850, a year which recorded four successes in ovariectomy as well as five failures in various parts of the country, and he lived to see the beginning of the antiseptic era. In the same year, Peaslee did the first double ovariectomy in New England, as well as the first successful operation in New England through a long incision. I think he was not well known to many of my early compeers, but his thoroughgoing and exhaustive scientific treatise, by far the best that had as yet appeared, reveals a perfect familiarity with the history of ovariectomy and a splendid grasp of the principles involved in its successful performance; his fame enveloped us who followed him as an aura. He early appreciated the advantage of vaginal drainage and brought his ligatures out through the vault rather than up through the abdominal incision.

As general surgery plodded along, unaware of the vistas about to open up, and as gynecology was struggling to improve her ovariectomy statistics *a nova*, a surgical genius, Lawson Tait (1845-1899), arose on the horizon in Birmingham to challenge and confute the faculty by the discovery of a vast virgin terrain of pelvic inflammatory diseases and extra-uterine pregnancies, which he opened up right under the very noses of his dubious colleagues. America, promptly embracing his teachings, began to lengthen her cords and strengthen her stakes, while Great Britain hesitated owing to the rambunctious hostilities aroused by this successor of Sir James Y. Simpson wherever he found a rival and opportunities for controversy. The difficulties in our own ranks lay only with the older men who never seemed quite to catch the *Fingerfertigkeit* called for in abdominal surgery and characteristic of Tait's remarkable pudgy fingers. There was an annual hegira from the United States to Birmingham, the men returning zealous propagandists of new operations for new diseases, which many at first even declared to exist only in a heated imagination. Chadwick of Boston took his wife to Tait; she developed peritonitis and died, and Tait, ungenerously throwing the blame on poor Chadwick who gave her an opiate to relieve her sufferings, ran away until the sad scene ended. Joe Price, who had literally devoured Tait's "Diseases of the Ovaries," came back justly to be dubbed the Lawson Tait of America. Arthur Johnson of Cincinnati, an erratic but able surgeon, went for a long stay and paid for the privilege of being an assistant, as did others—a custom somewhat repulsive to our American notions, especially when we came to realize that Tait was resenting the visits of confrères not on a financial

basis. My own visit to his clinic was in 1886 when I took a letter from Robert Patterson Harris, who had had some lively tilts with Tait anent his claim of numerous living viable extra-uterine children; Tait unable to substantiate his assertions tried the old dodge of "abusing the client" by calling Harris "nothing but a library surgeon." Let me note here that Harris, with all the resources of the vast Library of the College of Physicians in Philadelphia, was the most persistent and successful gatherer and analyst of medical statistics this country has yet seen, shining most in cesarean sections and cow-horn ribs. His interest in my work in my early years in Kensington, Philadelphia, was fatherly and most helpful. To return to the Harris introduction, my impression was that controversies were a thing detached, wholly impersonal, and like the jousts of tournaments, and that I would surely meet a warm welcome, but, as the Germans say, we must know our *Pappenheimer*; let me not, however, exaggerate a triviality. As I came upon Tait in his private consulting-room, he arose and started to go rapidly upstairs to an operation, with me trailing after. Overflowing with interest, I began the conversation injudiciously, when he put a warning finger to his lips to check the impropriety. Washing his hands hastily in the corner of the bedroom where he operated, he at once made a small incision, punctured, and slipped out an ovarian tumor a little bigger than his fist with deftness and dispatch; the one assistant had no contact with the operation field. We then stepped down to the ground floor to another bedroom, where he operated on a young woman and removed an obviously normal left ovary without comment; the pedicle was secured with his famous Staffordshire knot, but it slipped and gave rise to a troublesome hemorrhage. I saw him next at the British Medical Association at Brighton, where I had the temerity to discuss the diagnosis of extra-uterine pregnancy, emphasizing the ease of diagnosis in some cases. This caused him to comment on the "cocksureness of the young man." It was interesting to note that my British colleagues seemed pleased to find someone ready to differ with their Goliath. (I had been trained for the battlefield in the Philadelphia Obstetrical Society.) Dull of apprehension and slow in the uptake, I returned to Birmingham but saw no further operations by Tait. Thomas Savage with great courtesy saved the day by his courtesies. The redoubtable Mary Dixon Jones of Brooklyn, in Birmingham at that time visiting Tait, was availing herself of all the opportunities. This episode might be summarized in Virgil's line *tantaene irae celestibus animis*.

In this period in the late seventies and early eighties, the gynecological field as medicine's most promising branch was recruited by a group of fine, vigorous, wide-awake men. It must thrill any old-timer in these days to recall the names of our splendid predecessors, who at the dawn of our modern surgical science were the first active promoters, discovering new paths and directing her aims, methods, and accomplishments: names writ large on the imperishable records of our history. The mere roll call should stir the living to bow with respect and resolve to higher emprise. Let us remember, too, that it was in their day that so many special hospitals and special societies took their birth, while pathology evolved into a useful science, laboratories were formed, and a new cooperative spirit sprang up to the incalculable relief of suffering humanity. Together with these arose special journals, the American Journal of Obstetrics standing preeminent. This, too, was the

season, when aspirants to honors wrote papers for their home and national societies and flooded the country with their reprints. Special societies of national as well as local repute followed the example of the oldest special society, the American Gynecological holding its first meeting in 1876.

New York, including Brooklyn, was easily preeminent, following the impetus of Marion Sims and Thomas Addis Emmet, including T. Gaillard Thomas, easily preeminent in leadership, and A. J. C. Skene. Thomas did much to broadcast gynecology by his excellent text-book (1868) which ran into 60,000 copies and was translated into five languages. Some of us felt that he was restrained from doing his very best by the demands and attractions of his remunerative, fashionable practice. The Woman's Hospital of the State of New York, founded by Sims and fostered by Emmet, gave birth to a distinguished progeny, which scattered east and west and south. Among the quasi-older men were Bache Emmet, Hanks, Janvrin, Jewitt, and Charles Carroll Lee, not to exclude the genial Harrison. Paul F. Mundé exercised a wide influence as editor of the American Journal of Obstetrics. William M. Polk, Hermann Boldt, George Edebohls, and Palmer Dudley, with Florian Krug, W. Gill Wylie, and the too short-lived Hunter, were our great leaders, while Harry Coe cultivated the rare function of ardent pathologist.

In Syracuse, there was Ely van de Warker, and in Buffalo, Matthew D. Mann, editor of our earliest systematic work, did yeoman service.

In this period, John Homans (1836-1903) was the ovariologist of Boston (yclept Uncle John), with Ernest Cushing, Henry O. Marcy, and William H. Baker. James R. Chadwick (1844-1905), too, was a leader, and Walter L. Burrage and Richardson were coming to the front.

Chicago had her Byfords, elder and younger, E. C. Dudley, Watkins, J. Clarence Webster, and Fernand Henrotin, as well as Christian Fenger who belongs rather with the older group.

In Pittsburgh were Stansbury Sutton and the redoubtable F. X. Werder.

In Cleveland, Arthur Johnson flourished; in Cincinnati, Reamy, Zinke, and Bonifield; J. C. Reeve, also of the older group, labored in Dayton.

In Louisville, the debonair Lewis McMurtry strove for preeminence with William Wathen père.

Baltimore claimed its William T. Howard and H. P. C. Wilson of the older régime, and Washington, its Albert F. King and Joseph Taber Johnson.

Philadelphia's greatest claim to recognition in the gynecological field up to the advent of Joe Price and his colleagues lay in the work of John Stubb Perry (1843-1876), too early a victim of tuberculosis—a man of sterling qualities, who left us a never-to-be-forgotten work on extra-uterine pregnancy (1876), finished in extreme ill health but destined to remain a foundation stone for all the vast literature on this subject in the near future. Outstanding for all time is Joseph Price with his followers Joseph Hoffman, C. B. Penrose, eminent author of a widely used text-book, Montgomery Baldy, a vigorous fighter in all debates, B. C. Hirst, also eminent as writer and brilliant lecturer, and H. A. Kelly.

A graduate of the University of Pennsylvania under William Goodell, first professor of gynecology, Price caught his inspiration and began his real life's work in the old Philadelphia Dispensary, where with an inborn aptitude

for gynecology he found a fallow field only awaiting his arrival; Sims and Emmet were his heroes, followed but never replaced by Lawson Tait. Eccentric in his ways, formidable antagonist as well as warm partisan, he became, after Sims-Emmet, the most notable figure in American gynecology. Owing to his large, devoted, poor clientele, he became the deft, skilful, dramatic leader, embodying all the best traditions of gynecological surgery. His methods were noted for simplicity; a board for a table and a little handful of instruments, and there seemed to be nothing in abdominal or plastic surgery beyond his accomplishment.

The great forward movement of Price's epoch was in large measure due to better methods of examination: Better specular and better digital exploration. Indeed, the searching vagino- and recto-abdominal bimanual differentiation of intrapelvic conditions became a veritable shibboleth with the younger gynecologists in the eighties, and by the prominence given to these, with foolish pride we judged our confrères in other schools. Much credit is due Joe Price for entertaining and teaching the doctors who flocked to him from all over the country, among the most noted, his life-long friends, William and Charles Mayo.

In 1883, with opportunities available in the dispensary of the Episcopal Hospital where, as a resident, I was backed by a big-hearted chief, Andrew K. Minich, I took up my residence among the poor of Kensington and became on occasions the willing pupil of Price in plastic vaginal work. While in the abdomen both of us were making a beginning and developing rapidly on independent lines, yet each was indebted to the other. Joe's status, I think, was enhanced in the local arena by his racy, aggressive, admiring elder brother, Mordecai (*par nobile fratrum!*). His great subjects for operation or for declamation before a society were extra-uterine pregnancy, early ovariectomy, pus in the pelvis, and fibroid tumors. When he spoke the room was filled and the aisles crowded to hear his vigorous, spicy discussions and ofttimes denunciations. He began his oration with somewhat difficult, hesitant speech, but warming up with the manifest sympathy of his audience he soon became histrionic in the best sense as he depicted his operations with appropriate gestures, reached his climax, and ended by bringing down the house, with friends crowding around him. A favorite scene was the enactment of the way a flap was turned down like a "farmer letting down his barn door pants." All his intimates become reminiscent and recall the old days with sadness, wishing we might see his like again in the profession. There is an excellent portrait with a sketch of his life by his nephew-successor, W. Kennedy, in the *American Journal of Obstetrics*, lxx, 1912.

Mordecai, bizarre and bellicose like Joe, easily outstripped the latter in pugnacity, the expression of a vivacious unrestrained nature somewhat warped by a protracted crural osteomyelitis in his early boyhood days. The brothers grew up in Virginia with a father a strong abolitionist. In Civil War time, when horses were being requisitioned for the cavalry, as Mord told me, he was laid up with his crippled limb; on hearing that raiders were about and having a beloved pony which was his only real means of transportation, he crept out of bed and crouched at the open window, rifle in hand, ready to put a bullet through the first aggressor. A neighboring doctor on Spring Garden Street, Philadelphia, offended him in some way; one day, catching the doctor with his buggy drawn up close to the curb across the

street, Mord lashed his horse and, shouting expletives, dashed for his opponent with the intention of crashing buggy, horse, and driver. An escape was effected by the only available route, that of driving up on to the pavement against a house. Those who knew him recognized also a lovable side of his character although he lacked the unfailing enthusiasm and stick-at-iveness, as well as the dramatic gifts of the younger Joe.

While unfortunate jealousies springing up at home too often broke the early warm friendships, they could never obliterate the memories of Joe's skill and contagious enthusiasm and above all his devotion to the poor. Many an old colored mammy did he send out to the country to recuperate after an operation, bearing all the expense in days when money did not flow so rapidly into his coffers.

Although this is not the place to coordinate our narratives with the potent transforming factors, anesthesia, anti- and sepsis, and the new cellular pathology, one who has passed through such an era cannot but advert to them.

Anesthesia came first (ether, 1846; chloroform, 1847) to throw the doors wide open to the new age by enabling the operator to proceed with his work, without having his feelings wracked by the outcries of his suffering patient, at the same time putting him at liberty to extend the duration of the operation *ad libitum*. Well do I recall in the early eighties the still lingering notion that the great surgeon was a man of unparalleled dexterity who could amputate a thigh in a couple of minutes, or in two or three minutes extract a stone and bring his operation to a close. Such displays naturally became theatrical demonstrations. The deliberate and painstaking Syme, called from Edinburgh to the chair in London, went back home because he could not stand the comparison with his brilliant compeers, and what sort of a surgeon would our Halsted have made in those days! I well recall a personal humiliation when I operated in the presence of Charles Dulles and other visitors who came to see a tumor diagnosed as an extra-uterine pregnancy, done on the patient in her own bed in four minutes, which turned out to be an ovariectomy. It took a long time for some of us to realize that such exhibitions were morally wrong.

Any historical review reveals the fact that the date of a discovery only points to its slow acceptance and ultimate adoption. Virchow's Pathology (1858) for a long time had only a stepmotherly reception; our older men were awkward and embarrassed in introducing it with a show of learning, the younger men hating it as impracticable. I remember in the late seventies, sitting with the students on the benches, listening reluctantly to the stammering explosive utterances of James Tyson as he ejaculated such terms as rhabdomyosarcoma and leiomyosarcoma. In the gynecological field Harry Coe as mentioned took up pathology in the Woman's Hospital in New York, and later Thomas S. Cullen and J. Whitridge Williams at the Hopkins made their enviable reputations as they demonstrated its importance to a scientific surgeon.

My own work began in the Kensington Hospital for Women with the carbolic spray going and all instruments immersed in a carbolic acid solution. Joseph Hoffman there made us don the important white caps, and, so far as I know, Hunter Robb put in the first foot pedals used anywhere to control the water supply for the hand basins.

Listerian antiseptics had its battles, too, before it was comfortably domi-

ciled in the gynecological family; the older men were driven to half-hearted acceptances by which they too often violated the principle and missed attaining the end. Marcy of Boston was one of the early leaders and Malloch of Hamilton, Ontario, was another. C. B. Nancrede worked hard in the Episcopal Hospital in Philadelphia trying to find an ideal drug which would sterilize the whole operative field. Some of the younger men decried it by declaring with Tait for making a shibboleth of asepsis without antisepsis. It was reported that Tait declared that if he could get enough dry germs, he would be willing to pack his wounds with them! We were slow in learning that our hands were the chief offenders in wound contamination. Robb in my clinic at the Hopkins Hospital wore sterilized feeding bottle nipples on his thumb and index finger in taking cultures from drainage tubes, and Halsted wore heavy coachman's rubber gloves in his animal operations. But how slow we were in adopting all these necessary adjuvants. Clifford Allbutt has an illuminating footnote in his St. Louis lectures (1904), on "The Historical Relations of Medicine and Surgery to the End of the Sixteenth Century" (page 94), to the effect that "a veterinary surgeon, who flourished greatly in Yorkshire some hundred years ago as a marvelously successful operator, astutely evaded all prying and questioning into his secret, even when in imminent peril of a bed of sickness. He survived to carry all before him for many years longer. At length, bowed down by old age and decrepitude, he was again implored by his son to tell what he did in the secret half hour before operating. Life was ebbing at last, and the worn out old man whispered with his passing breath, "I biles my tools!" I have been unable to trace this reference to its source.

It was in this hurly-burly period in gynecology and while Lister was knocking at our doors for recognition, that on August 17, 1872, Robert Battey of Rome, Georgia, did a new operation, deliberately opening the abdomen to remove ovaries not obviously diseased for the relief of dysmenorrhea and hystero-epilepsy. Tait removed the ovaries August 1, 1872, to relieve the hemorrhages of a uterine myoma. He was also the first deliberately to remove a small diseased ovary because it was the cause of the patient's pain. It is sometimes hard to adjudicate priority in Tait's work as his claims are conflicting. Priority of publication rests with Battey by reason of his publication in the Atlanta Med. Jour., September, 1872. Those who knew both Battey and Tait will hardly subscribe to the statement in Mann's System of Gynecology, ii, p. 40, that Tait's deportment in this matter was one of reticence and modesty (sic!), standing out in bold relief to the zeal and persistency of Battey, who availed himself of every opportunity to spread his histories before the profession, stoutly and vigorously defending his operation from attacks from every quarter. Marion Sims first used the expression, "Battey's operation"; the title "normal ovariectomy" was unfortunate. In speaking about pelvic surgery, Joe Price once declared (*vide* Ross P. Cox), "Old Battey, in a way, was the daddy of it all." Tait's first removal of a diseased ovary, described as being as large as a pigeon's egg and full of a thick grumous matter, was probably for what we call, after John Sampson, an endometrioma.

I visited Battey's first patient living with her sister in good health many years after his death, on the occasion of making the address in Rome, Georgia, at the dedication of the Battey monument in 1921. The operation, as planned by its originator, had unfortunately too great a vogue for some years, since

it often precipitated a nervous depression far worse than the previous disease. Long lists of successful operations were often padded with these operations for very slight causes as a way of improving celiotomy statistics.

As great as any other discovery in the surgical realm, and yet a natural corollary to the classical ovariectomy, was the discovery of the frequency with which the uterine tubes are involved in a host of pelvic diseases, brought out by Lawson Tait. MacKay says: "If we were to single out the one subject upon which Tait's future permanent fame will rest, we would not hesitate for a moment in selecting his original work in establishing the surgery of the fallopian tubes as the greatest achievement of his life. Even the existence of diseased appendages was denied, and his opponents did not hesitate to use terms about Tait which left their hearers in doubt that they looked upon the provincial surgeon as nothing more than a liar." His first case in 1877, done for a parovarian cyst, proved to be what he vaguely designated as a hematosalpinx; two years later he removed a hydrosalpinx with the left ovary. Both patients made a splendid recovery. In 1879 it was a pyosalpinx, which also recovered. From this group and the accumulated experiences speedily following with his writings, there soon sprang up an extensive gynecological literature. Those of us in this country who entered upon this battlefield were often vigorously opposed by our elders who insisted that we were making much ado over some surgical rarities. The retort courteous consisted in plates full of specimens brought to the meetings and our own battles over the best methods of operating. Here Joe Price led the van—zealous, eager, persistent, and severely critical of the adversaries who hesitated to come across. In time I, and no doubt others, grew weary of incessant dissensions and iterations over the subject of pus tubes, and longed to advance along fresh lines. We succeeded in eliminating the previously common diagnosis of cellulitis where it was a pyosalpinx.

In 1880, in Tait's table of 26 completed operations and 2 incomplete, we find dysmenorrhea, menstrual epilepsy and mania, menorrhagia, hemorrhage from myoma, menorrhagia due to hypertrophied ovaries, and abscess of the ovary; in 25 of the complete operations, there was only 1 death.

Gynecological history would lose one of its chief interests if we omit some reference to the epic struggle with fibroid tumors, a problem so different from ovariectomy. When we came at last to deal with this group with its varied forms and complications we were in full possession of all the facilities of perfect anesthesia, the ability to secure an excellent exposure with the Trendelenburg posture and a long incision, the fear of infection being largely removed. The difficulties lay with the great fleshy vascular masses themselves and the risks of enucleation of the tumors or their removal by a high or low amputation. Operations at first often seemed well-nigh impossible owing to the great network of vascular channels, giving rise at once to frightful hemorrhages.

This history has been admirably written by Charles P. Noble (Amer. Jour. Obstet., xl, 1899), who with Wayne Babcock, Jr., studied all the reported cases done by abdominal operations, up to 1863, inclusive. Noble credits Charles Clay of Manchester in 1843 with the first operation; the patient died of hemorrhage. The next, diagnosed as an ovarian tumor, was abandoned. This remained the attitude of some older men; I recall a patient coming to me from Robert Battey in the early 90's; he had opened the abdo-

men and, on finding the fibroid, closed it. Koeberle in 1863 was the first continental surgeon to do a hysteromyomectomy. Turning to America, "W. L. Atlee performed the first successful myomectomy in 1844. In 1846 John Bellinger appears to have done the first deliberate hysteromyomectomy for a fibroid tumor of the uterus"; his patient died. In 1853 Burnham of Lowell did a hysteromyomectomy with a successful issue, the operation being undertaken with a diagnosis of ovarian tumor. He performed 15 such operations with 3 recoveries. The first operation was done perforce as the tumor was extruded from the abdomen and he was unable to replace it. G. Kimball of Lowell, Massachusetts, in 1853, was the first deliberately to perform hysterectomy for fibroid tumor with a successful result, dropping the pedicle. In this year, Washington L. Atlee published his essay, "The Surgical Treatment of Certain Fibrous Tumors of the Uterus" (Trans. Amer. Med. Assoc., 1853), strongly advocating the operation, "his successes were largely attained by attacking the tumors by the vaginal route. He operated by the abdominal route, removing pedunculated and sessile tumors, and was the first to do a myomectomy for a sessile tumor." The results were not encouraging.

The difficulties following these early radical operations were the hemorrhages and the sepsis from the thick pedicle. To avoid the hemorrhage, Koeberle devised his wire *serre noeud* drawn tight about the pedicle.

E. H. Trenholme (1876) of Montreal, Hegar of Freiburg, and Tait tried an extension of Battey's operation in this field, hoping that the simple removal of the ovaries bringing about the menopause would cause the hemorrhages to cease. Results more than satisfied their expectations, although Emmet (Amer. Jour. Gyn., 1884) quotes Tait as saying, "I removed the ovaries for the arrest of hemorrhages in cases of myoma three times, in all three with fatal results." McKay states that Tait removed the appendages from 1880 to 1889 in 262 cases with but 4 fatal results. He also notes, "I seldom ever saw him do this intraperitoneal operation for fibroids, although he has recorded the fact that he often did it from 1892 to 1899; but he did not like the operation and no doubt found it difficult—although he denied this—because he refused the help of the Trendelenburg position which makes the operation so easy." Hegar advocated it before the German Gynecological Society in 1879, limiting it to tumors of lesser size. Tait had the curious notion that it was also most essential to remove the fallopian tubes to stop hemorrhage.

On account of the dangers of the abdominal operation, our forefathers throughout this period made heroic efforts to get the tumors out by the vagina; to this end T. Gaillard Thomas used a spoon saw with which he worked his way into the substance of the tumor, breaking it down in part and then waiting for the spontaneous extrusion of the remainder. The large mortality was doubtless due to the cooperating finger nails of the surgeon. I recall a distressing instance of my own, where the patient with a small tumor died after the growth was shelled out with my index finger. Throughout this period also vast quantities of ergot were consumed by the poor victims, as recommended by Hildebrandt of Königsberg, who advocated subcutaneous injections (1872). For a considerable period, the battle raged in the abdominal hysteromyomectomies over the best *serre noeud* or clamp grasping the base of the tumor in the extraperitoneal treatment, the crushed pedicle sloughed through as the constricting implement was tightened day by day.

For a time we all resorted to Hegar's elastic ligature, but that, too, defeated us with its sequelae of sepsis or hemorrhage.

In 1886 I visited Schroeder's Clinic on the Artilleriestrasse in Berlin to find him a zealous advocate of hysteromyomectomy, not as yet because of its excellent results but by reason of his conviction that the operation was destined to run the same gamut as ovariectomy and ultimately to prove equally successful. *Mirabile dictu*, it was a general surgeon, Lewis Atterbury Stimson (1844-1917) of New York who made the egg of Columbus stand on its point (Med. News, 1889). Stimson suggested and practiced the systematic ligature of the ovarian and uterine arterial trunks, as the cardinal principle in a hysterectomy. As McKay observes, Kaltenbach, writing about 1886, came close to the truth when he stated, "Recent improvements in intra-peritoneal methods consist of the isolated ligature of the main bundles of vessels, of suturing the surface of amputations and covering it with peritoneum." Stimson's illuminating suggestion forthwith transformed the operation. And as for the cervical pedicle, we all soon began sewing it up and dropping it as Emmet had done, and, presto! success was at the door.

One must not forget Benny Baer's operation (Trans. Amer. Gyn. Soc., xvii, 1892) that so astonished the American Gynecological Society, consisting in the ligation of both broad ligaments while forcibly elevating the uterus, the vessels all being snugly tied together with the cervix elongated by the traction; the severance was made without further ligature or suture and nothing was done to the cervical canal. He reported 9 cases without a death. Mary Dixon Jones, who found a warm advocate in Polk, in 1888 advocated panhysterectomy, in these latter years coming more into vogue because of fear of a subsequent cancer of the cervix (New York Med. Jour., xlviii, 1888).

Among the most interesting reminiscences are those connected with the bizarre history of extra-uterine pregnancy. John S. Parry, aforementioned, brought the subject before the public in his work of 276 pages. Lawson Tait was its surgical progenitor, though hesitant about the diagnosis. Price with his enthusiastic following made the profession realize its vital importance by his dramatic expositions in our surgical societies, where the little group of survivors will recall him depicting the exsanguinated condition of the patient and her rapid small pulse and the need of hurried relief, with the details of the operation—the opening of the abdomen and the blood under tension spouting up to the ceiling. J. Whitridge Williams did an important piece of work here also ("Gynecology and Abdominal Surgery," Kelly-Noble, 1910, p. 130), including a review with histologic studies.

The significance of the leukocyte count was emphasized by L. K. P. Farrar in a study of 150 cases; Polak of Brooklyn analyzed 227 cases, all but 5 presenting an abnormal menstrual flow—so common had this reputed exceedingly rare disease become!

Even such brief notes must mention A. N. Creadick of the Yale Clinic who repeatedly resorted with success to autotransfusion.

How much from first to last has been written about cervical conditions! There is Emmet's operation for laceration after an elaborate preparatory treatment, anatomically logical but factually vastly overdone and often utterly ineffectual. In Germany I found on several visits that the operation was not being done, "erosions" holding sway. Guy L. Hunner revived in a new sense the excellent plan of cauterization of the exposed diseased glands,

and Graves of Boston advocated the simple effective recourse to a thorough curettage of the cervix.

Cancer of the cervix, one of the most vital subjects in gynecology, has had a curious history. In a disease, invariably fatal and yet so local in its incipency, it would seem that promptitude in the diagnosis would have been emphasized from the first. Yet thousands of women have yielded their lives to such an erroneous diagnosis as "ulceration of the neck of the womb," almost never seen. And still the vicious old habit persists.

In the treatment of cancer with radium, Robert Abbé of New York deserves the credit of leadership; thrilled by Madame Curie's discovery, he visited her in Paris, made the first substantial purchase, and on his return inaugurated experiments to determine its activity and range of utility.

I dare not close this brief exposition without a merited tribute to John Byrne of Brooklyn, who wrote a book on "Electrocautery in Uterine Surgery" in 1872. Byrne treated all his cervical cancers with the electrocautery, defining his method as a "supravaginal excision by the cautery knife, not loop, and thorough additional cauterization of the bottom, sides, and edges of the excavation—in other words, a dry roast." He detailed his experiences in his presidential address before the American Gynecological Society and reported them fully in the *American Journal of Obstetrics*, but, alas, the voice of the prophet fell unheeded by men so enamored of the brilliant surgical ways that like the adder we turned only a deaf ear to his caustic criticisms of our ways with their demonstrably inferior results. It was Hermann Boldt who later made the impartial investigation which gave Byrne his dues.

It would take me too long to follow the slow progress of our surgery in the restoration of the broken-down vaginal outlet and the various degrees of prolapsus, beginning with such crudities as the LeFort operation and the hideous suppurating operations on the vulva and continuing on down through the decades to the present excellent, effectual, established procedures.

Here is inevitably recalled the name of Emmet, with his well-planned and painstakingly executed posterior bilateral sulcal denudations, and the anatomical studies of the elder Hadra of San Antonio, Texas, and the various anterior wall operations dealing with the awkward cystocele, culminating in the fine interposition procedures of Watkins and George Gray Ward's discriminating treatment of vesical and rectal displacements; one needs, I say, but to recall these things to realize the advances toward perfection in this field. Nor let us forget the part borne by the French in insisting on the importance of exposing and uniting the levators, in supporting the outlet, zealously adopted by us, I think before gaining acceptance where it originated.

After all, everything considered, how demonstrably cosmopolite is our humane science. While the whole race is groaning under its staggering burden of misery due to its handicaps and disabilities, how obviously is it the part and parcel of all nations disinterestedly to contribute to the amelioration. Disease knows no national boundaries, and for that reason we should never cease to embrace the world as one vast brotherhood. We of the healing craft ask no higher introduction than our brother's need. When such an attitude becomes universal, then wars and jealous rivalries will cease and the gospel of universal love will reign.